

Nonlinear Modeling: Advanced Black-Box Techniques. Edited by Johan A. K. Suykens and Joos Vandewalle. Kluwer Academic Publishers, Boston, MA. (1998). 256 pages. \$125.00, NLG 285.00, GBP 85.00.

Contents:

Preface. Contributing authors. 1. Neural nets and related model structures for nonlinear system identification (Jonas Sjöberg and Lester S.H. Ngia). 2. Enhanced multi-stream Kalman filter training for recurrent networks (Lee A. Feldkamp, Danil V. Prokhorov, Charles F. Eagen and Fumin Yuan). 3. The support vector method of function estimation (Vladimir Vapnik). 4. Parametric density estimation for the classification of acoustic feature vectors in speech recognition (Sankar Basu and Charles A. Micchelli). 5. Wavelet based modeling of nonlinear systems (Yi Yu, Wayne Lawton, Seng Luan Lee, Shaohua Tan and Joos Vandewalle). 6. Nonlinear identification based on fuzzy models (Vincent Wartz and Stephen Yurkovich). 7. Statistical learning in control and matrix theory (M. Vidyasagar). 8. Nonlinear time-series analysis (Ulrich Parlitz). 9. The K.U. Leuven time series prediction competition (Johan A.K. Suykens and Joos Vandewalle). Index.

The Importance of Being Fuzzy and Other Insights from the Border between Math and Computers. By Arturo Sangalli. Princeton University Press, Princeton, NJ. (1998). 173 pages. \$24.95, £18.95.

Contents:

Preface. Acknowledgments. To the reader. I. Blurred visions. 1. Classes with uncertain borders. 2. Fuzzy does it. II. Limits. 3. The limits of classical computing. 4. The limits of formal reasoning. III. Natural solutions. 5. Net gains. 6. Solutions via evolution. Afterword. Appendices. 1. Fuzzy inferences. 2. The functions of natural numbers cannot be enumerated. 3. The halting problem is unsolvable. 4. Learning with the back-propagation algorithm. Index.

Floating, Flowing, Flying: Pieter J. Zandbergen's Life as Innovator, Inspirator and Instigator in Numerical Fluid Dynamics. Edited by D. Dijkstra, B. J. Geurts, J. G. M. Kuerten and H. K. Kuiken. Kluwer Academic Publishers, Dordrecht. (1998). 253 pages. \$105.00.

Contents:

Dedication. Low-Reynolds-number flow over partially covered cavities (C.H. Driesen, J.G.M. Kuerten and M. Streng). Computing flows on general two-dimensional nonsmooth staggered grids (P. Wesseling, A. Segal, C.G.M. Kassels and H. Bijl). On the sound radiated by a turbulent bubbly flow (L. Van Wijngaarden). Two-dimensional incompressible Navier-Stokes calculations in complex shaped moving domains (Kris Riemslag, Jan Vierendeels and Erik Dick). Rheological modeling with Hookean bead-spring cubes (SC, BCC and FCC) (A.I.M. Denneman, R.J.J. Jongschaap and J. Mellema). Low-mach-number asymptotics of the Navier-Stokes equations (Bernhard Müller). On the resolution of critical flow regions in inviscid linear and nonlinear instability calculations (Vassilios Theofilis). Unsteady fully-developed flow in a curved pipe (N. Riley). Boundary-integral-equation methods for screen problems in acoustic and electromagnetic aerospace research (H. Schippers). Spectro-consistent discretization of Navier-Stokes: A challenge to RANS and LES (R.W.C.P. Verstappena and A.P. Veldman). A free-convection boundary-layer model for the centrifugal etching of an axisymmetric cavity (H.K. Kuiken). Numerical simulation of differential systems displaying rapidly oscillating solutions (I. Moise, E. Simonnet, R. Temam and M. Ziane). Wave groups in uni-directional surface-wave models (E. Van Groesen). Progressive cross waves due to the horizontal oscillations of a vertical cylinder in water. Evolution equations (M. Markiewicz and O. Mahrenholtz).

Adaptive Hypertext and Hypermedia. Edited by Peter Brusilovsky, Alfred Kobsa and Julita Vassileva. Kluwer Academic Publishers, Dordrecht. (1998). 252 pages. \$98.00, NLG 175.00, GBP 59.00.

Contents:

1. Methods and techniques of adaptive hypermedia (Peter Brusilovsky). 2. Adaptive hypertext navigation based on user goals and context (Craig Kaplan, Justine Fenwick and James Chen). 3. Metadoc: An adaptive hypertext reading system (Craig Boyle and Antonio O. Encarnacion). 4. User modelling in the interactive anatomy tutoring system ANATOM-TUTOR (Ian H. Beumont). 5. Hypadapter: An adaptive hypertext system for exploratory learning and programming (Hubertus Hohl, Heinz-Dieter Böcker and Rul Gunzenhäuser). 6. A glass box approach to adaptive hypermedia (Kristina Höök, Jussi Karlgren, Annika Waern, Nils Dahlbäck, Carl Gustaf Jansson, Klas Karlgren and Benoît Lemaire). 7. User-centered indexing for adaptive information access (Nathalie Methé and James R. Chen). A task-centred approach for user modeling in a hypermedia office documentation system (Julita Vassileva). Index.

Cultural Boundaries of Science: Credibility on the Line. By Thomas F. Gieryn. University of Chicago Press, Chicago. (1999). 398 pages. \$21.00, £16.75.

Contents:

Preface. Introduction: Contesting credibility cartographically. 1. John Tyndall's double boundary-work: Science, religion, and mechanics in Victorian England. 2. The U.S. Congress demarcates natural science and social science (Twice). 3. May the best science win: Competition for the Chair of Logic and Metaphysics at the University of Edinburgh, 1836. 4. The (cold) fusion of science, mass media, and politics. 5. Hybridizing credibilities: Albert and Gabrielle Howard compost organic waste, science, and the rest of society. Epilogue: Home to roost: "Science wars" as boundary-work. Bibliography of secondary works. Index.